

CLAIMS

1. A method for preparing a fluoroplastic silicone composition comprising:

(I) mixing

- (A) a silicone base comprising a curable organopolysiloxane,
 - (B) an optional crosslinking agent,
 - (C) a cure agent,
- to form a silicone compound;

(II) mixing the silicone compound with

- (D) a fluoroplastic,
- (E) an optional compatibilizer,
- (F) an optional catalyst;

and

(III) dynamically vulcanizing the silicone compound,

wherein the weight ratio of fluoroplastic (D) to silicone base (A) in the fluoroplastic silicone composition ranges from 95:5 to 25:75.

2. The method of claim 1 wherein the silicone base comprises;

- (A') a diorganopolysiloxane containing at least 2 alkenyl groups having 2 to 20 carbon atoms, and
- (A'') an optional reinforcing filler.

3. The method of claim 2 wherein the crosslinking agent is present and is an organohydrido silicon compound.

4. The method of claim 3 wherein the cure agent is a platinum catalyst.

5. The method of claim 1 or 2 wherein the cure agent is a free radical initiator.

6. The method of claim 1 wherein the fluoroplastic is prepared from a monomer selected from the group, tetrafluoroethylene, vinylidene difluoride, chlorotrifluoroethylene, vinyl fluoride and mixtures thereof.

7. The method of claim 1 wherein the compatibilizer (E) is present and is selected from;
(E¹) an organic compounds which contain 2 or more olefin groups,
(E²) organopolysiloxanes containing at least 2 alkenyl groups,
(E³) olefin-functional silanes which also contain at least one hydrolyzable group or at least one hydroxyl group attached to a silicon atom thereof,
(E⁴) an organopolysiloxane having at least one organofunctional groups selected from amine, amide, isocyanurate, phenol, acrylate, epoxy, and thiol groups,
(E⁵), a dehydrofluorination agent,
and any combinations of (E¹), (E²), (E³), (E⁴) and (E⁵).
8. The method of claim 1 wherein the catalyst (F) is present and is selected from an organic peroxide.
9. The method according to any one of claims 1 – 8 wherein steps II and III are performed in an extruder.
10. A fluoroplastic composition produced by any one of claims 1 to 9.
11. An article of manufacture comprising the fluoroplastic composition of claim 10.